
A Forest Ethic and Multivalued Forest Management

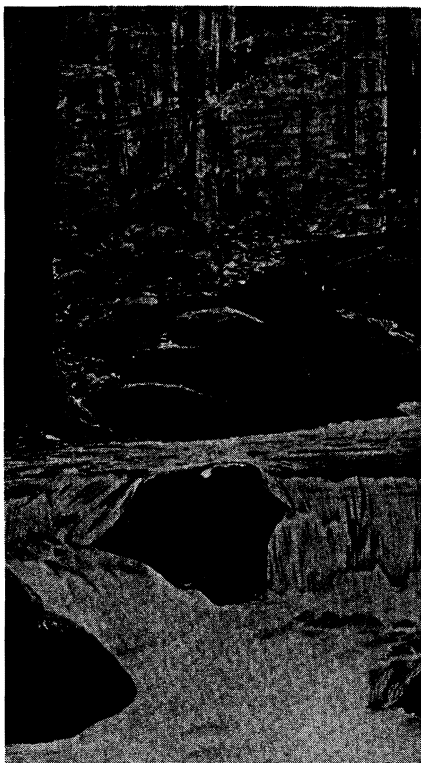
*The integrity of forests and of foresters
are bound together*

By Holmes Rolston III and James Coufal

“Quit thinking about decent land-use as solely an economic problem. Examine each question in terms of what is ethically and esthetically right, as well as what is economically expedient. A thing is right when it tends to preserve the integrity, stability and beauty of the biotic community. It is wrong when it tends otherwise” (Leopold 1968, p. 224–25).

“I believe a paradigmatic shift . . . confronts the profession of forestry today, and we are due for one: professional forestry has not changed its fundamental perceptions in more than 200 years” (Behan 1990, p. 12).

Worthy aspirations shift subtly over time. The objectives of the Society of American Foresters “to advance the science, technology, education, and practice of professional forestry and to use the knowledge and skills of the profession to benefit society” (Society of American Foresters 1990), reflecting Canon 1 in the SAF Code of Ethics, have served the Society well and remain admirable goals in the context they address: what foresters ought to do to bring scientific, technological, and educational benefits to human society. But foresters have begun to ask whether those objectives cover the entire horizon of professional forestry. Should this forestry ethic for society now become also a forest ethic, what Leopold called a land ethic?



Credit: Unknown

Holmes Rolston III is professor, Department of Philosophy, Colorado State University, Fort Collins; James Coufal is professor, College of Environmental Science and Forestry, State University of New York, Syracuse.

An Extended Focus

Nothing in the present SAF statement restricts consideration to economic benefits; to the contrary, the larger social welfare is envisioned. But Leopold has a further focus: the biotic community. The SAF statement has no explicit concern for this focus. Perhaps this concern is implied so far as benefiting human society requires beauty, integrity, and stability in biotic communities. The two have entwined destinies: in forestry, you cannot have a sound economy on a sick environment. Still, Leopold does call this a land ethic; he laments that land use is “a matter of expediency, not a matter of right and wrong” (Leopold 1968, p. 201). He expands ethics into territory not previously thought to be ethical—not at least in the European-American West. “The land ethic simply enlarges the boundaries of community to include soils, waters, plants, and animals, or collectively: the land” (p. 204). “That land is a community is the basic concept of ecology, but that land is to be loved and respected is an extension of ethics” (p. viii–ix).

Leopold contrasted fundamental differences about value in the philosophical sense; today we call this a paradigm shift or change of reference frame. This need not mean that the anthropocentric reference frame is wrong, only that it is relative and that there is another that is just as relatively moral: the biotic. A complete professional ethic will not only be an ethic for foresters in their responsibility to human society, but an ethic that incorporates respect for forests as natural systems.

The SAF Council has agreed that it is time to consider such a responsibility in the SAF Code of Ethics. Consider what colleagues are saying: “The term forester has lost much of its former meaning, and an identity crisis exists for the profession” (Duncan et al. 1989). Public concern with below-cost sales on national forests is “the recent manifestation of a broad, deep, and enduring change in public attitude toward the forests” (Shands 1988). Speaking as a forester, Shields (1989) finds that the public is “examining resource issues with the presumption that the resource must be protected from us.” “To provide leadership in resources management, foresters must first seek common ground within their own ranks” (Madden 1990). “As representatives of the land we are a house divided” (Wood 1990). The growing interest in New Forestry (Franklin 1989) and “New Perspec-

tives” (see sidebar) shifts toward concern for the whole forest and its diverse values. Behan (1990) offers “multiresource forest management” to replace the long-standing paradigm of sustained-yield, multiple-use forest management.

A forest ethic will require an unprecedented mix of science and conscience, applied science and applied ethics. Two issues are joined here. One is already under way: consideration of the nature of the land ethic SAF should adopt. The second, also under way but further off in full implementation, is whether and how forestry should develop its traditional multiple uses into an affirmation of multiple values, and whether these newly affirmed philosophical values can be made operational. In this more complete professional ethic, foresters will profess what they believe about forests as well as about benefits to human society.

Community or Commodity

Where ethics remains concerned exclusively with human community, then the natural environment, outside ethics proper, can only count instrumentally to society, that is, only as commodity or amenity. Ecology describes “the land” as what it is—an ecosystemic community. Leopold moves to what it ought to be by urging respect for the larger biological community, of which the human community is an integral part. Forestry’s traditional concept of conservation is not displaced by Leopold’s land ethic but is included within it.

Forestry, an applied science, is also a pure science when it describes how forests work, whether or not humans are making any resourceful use of them. A forest is originally and objectively a community. Only with human needs and preferences projected onto it does a forest become a commodity. “Forest products” are secondarily lumber, turpentine, paper, cellophane; what the forest “produces” primarily is oak trees, ferns, warblers, squirrels, mosquitoes. The first-order, natural production precedes and supports any second-order, humanistic production.

Resource use exploits the natural productivity of forests and redirects it to benefit human society. But resource use that ignores how the commodity is related to the larger biotic community is in trouble; the usual result is degradation of the biotic and ultimately the human community. A holistic forest ethic affirms the forest as resource, but denies that it is

Should this forestry

ethic for society

now become also

a forest ethic,

what Leopold called

a land ethic?

only a resource. In the first stage of the expanding ethic, foresters will move past short-term economic criteria to longer-term "uses"; in the second stage they will move beyond forests merely as a human resource. They will understand their relationship with the beauty, integrity, and stability of the biotic community throughout public and private forests (though perhaps in differing degrees in designated wilderness and intensively managed forests).

The Present Code

The existing SAF code remains at Leopold's first level, relating persons to persons and persons to society. How might it be enlarged?

1. The Preamble reads: "The purpose of these canons is to govern the professional conduct of members of the Society of American Foresters in their relations with the public, their employers, including clients, and each other." Such an interpersonal code says nothing about biotic community; it is about forestry as a practice, not about forests as natural systems. Revealingly, the word "forests" does not occur in the code, only "forest resources." The Code of Ethics and Professional Conduct for the American Institute of Certified Planners urges, "A planner must strive to protect the integrity of the natural environment" (American Institute of Certified Planners 1989, p. 1). In the shift of reference frame we recommend, the SAF code will urge, "A forester must strive to protect the integrity of forest communities in the natural environment."

2. In a summary of its responsibilities, SAF places first the "enhancement of public understanding and appreciation of forest resources." A more complete responsibility will be to seek "enhancement of public understanding of forests and forest resources." The second responsibility SAF claims is "stewardship of forestry's public and professional image." Perhaps SAF should be less concerned about forestry's image and work to produce foresters deeply concerned about healthy biotic and human communities and about optimizing their values, confident that the image problem will be resolved through what SAF president Whaley calls "demonstrated exemplary stewardship of the resources" (Whaley 1990). The second responsibility could thus become "stewardship of public and private forests."

3. SAF states its "national involvement

Evolving Values

—In strongly worded memos in November 1989, sixty-five Forest Service supervisors told Forest Service Chief F. Dale Robertson that the present management of the Service is out of touch with the values of the public and of many of its own employees (Feedback to the Chief from Forest Supervisors of Regions 1, 2, 3 and 4, November 14–16, 1989). The memos drew prime-time national media coverage.

—The Association of Forest Service Employees for Environmental Ethics, launched with two members in 1988, had grown to 1,000 members by January 1990 and to more than 5,000 members by January 1991.

—Forest Service Chief Robertson announced on October 19, 1989, a new national policy in which "the Forest Service recognizes the many significant values associated with old-growth forests" (USDA Forest Service Position Statement, Oct. 1, 1989). In 1990 the Forest Service launched "New Perspectives," emphasizing "principles and philosophy about sustainable forestry and harmony between man and land . . . a land ethic: 'Caring for the land [and] multiple use/multiple value'" (Hal Salwasser memo, USDA Forest Service, Apr. 4, 1990).

—Congress declared that "it is the policy of the United States" on public lands that there be "a combination of balanced and diverse resource uses . . . without permanent impairment of the productivity of the land and the quality of the environment with consideration being given to the relative values of the resources and not necessarily to the combination of uses that will give the greatest economic return" (Federal Land Policy and Management Act of 1976, sec. 102, 103).

—Congress declared that Americans want to preserve the "primeval character and influence" of wilderness, "where the earth and its community of life are untrammelled by man, where man himself is a visitor who does not remain" (Wilderness Act of 1964, sec. 2c).

—Congress deplored extinction of species and lamented the lack of "adequate concern and conservation." "These species are of esthetic, ecological, educational, historical, recreational and scientific value to the Nation and its people," and such values should temper "economic growth and development" (Endangered Species Act of 1973, sec. 2a). In compliance the Weyerhaeuser Company set aside 900 acres in Washington and Oregon to protect eight bald eagle nesting sites, and 155 acres in southern states to protect twenty-two colonies of red-cockaded woodpecker.

—In 1990 Congress considered an amendment to the National Environmental Policy Act that would require consideration of biodiversity in developing impact statements and require all previous EISs be revised to meet this standard.

—The Forest Service and the Governor's Task Force on Northern Forest Lands released their report covering Maine, New Hampshire, Vermont, and New York. The New York Governor's Task Force on Forest Industry released "Capturing the Potential of New York's Forests." The Governor's Commission on the Future of the Adirondacks in the 21st Century released its report. All three dealt with the long-term integrity of forests and emphasized the coexistence of the "working forest" with the "preserved forest" to maintain the quality of life.

—The House of Society Delegates voted unanimously in July 1990 to recommend that the SAF Council draft a statement on a land ethic to be submitted to the membership for a vote. Independently, the Council set up a Strategic Planning Task Force to plan a five-year mission, including a mission statement.

There can be no healthy

human community

unless it is integrated

with some land

community

in natural-resource policy," declaring "the sole objective is to define resource problems and offer scientifically based solutions embodying the best judgment of forestry professionals." A broader, community-oriented perspective would have foresters analyze values available on forested lands, based on a scientific understanding of forest and human systems and embodying the best judgment of forestry professionals, then recommend solutions that optimize these values. The deeper natural-resource problem is as philosophical as it is technical. The problem lies in treating as mere resource that toward which one ought to have a land ethic. The solution is to see both human society and forest community as the comprehensive environment of commodity.

Multiple Values

Multiple use is a commodity model, treating forests expediently as nothing but resource. Multiple value is a community model, respecting both human and forest communities and seeking an integrated appreciation and development of values provided by forests. In 1976 Congress declared that, on public lands, consideration ought to be given to the relative "values" and not necessarily to the "uses" that provide the greatest economic return (Federal Land Policy and Management Act of 1976, P.L. 94-579). That not only moves past economics to noneconomic uses; it moves past "uses" to "values." In an expanded land ethic, a comprehensive analysis of the multiple values carried by natural systems will enrich the model of multiple use.

Multiple use asks of a thing, What is it good for? What use does it have? Unsurprisingly, the question is often answered economically, seeking maximum exploitation of resources. There are no ethical issues regarding the commodities and amenities as such; the ethical issues deal with just distribution of benefits within the community of persons.

Multiple value asks, What values are present intrinsically (in the forests regardless of humans) as well as instrumentally (in forests used as human resources)? How can this richness be optimized? The community model seeks to optimize not only human uses for recreation, timber, range, and watershed but also beauty, integrity, and stability in the biotic community.

Value-based, community-oriented professional ethics will result in SAF objectives that urge foresters to use their

skills so that society can enjoy the multiple values its forests provide. Almost as if to anticipate an expanded ethic for forestry, The Wildlife Society, for comparison, seeks to "increase awareness and appreciation of wildlife values" and "undertake an active role in preventing human-induced environmental degradation." It believes "that all forest management must be designed to maintain healthy functioning ecosystems, that wildlife is an integral part of each forest ecosystem, and that to be ecologically acceptable forest management must include considerations and actions for wildlife" (The Wildlife Society 1988).

SAF should lead the way for foresters by stating that forests, in their many forms, are a basic component of human culture and then insist that foresters have the responsibility to (1) increase awareness and appreciation of forest values and (2) take an active role in preventing human-induced forest degradation. All forest management ought to be designed to maintain healthy functioning ecosystems—a genuine land ethic.

Adding Values

The five statutory multiple uses are recreation, timber, range, watershed, and wildlife and fish. Expanding these, ten categories could integrate human and biotic values and emphasize realms that multiple use often neglects.

1. Life support values. Underlying all economic values are the timeless natural givens that support everything else—forests, sunshine, wind, rain, rivers, soils, the cycling seasons, flora and fauna, trophic pyramids, succession. There can be no healthy human community unless it is integrated with some land community. Indeed, "land" in Leopold's sense is the source of all life.

2. Economic values. Civilization as we know it would have been impossible without wood (Perlin 1989). The nation needs wood, fiber, cellulose, and all the commodities that can be derived from its forests. This fundamental utility is so well established that there is no need to emphasize it.

3. Scientific values. At least half of what there is to know about forests remains undiscovered, especially at the ecosystem level. The least understood level of biological organization is regional landscape ecology.

4. Recreational values. Recreation in the forest takes place in the context of creation. Humans leave the reasoned,

manufactured, cultured environment to seek something wild and primeval. People recreate in forests to show what they can do, so they like a trail to hike, a mountain to climb, game to shoot. But they also like to be let in on nature's show, to find warblers migrating in the spring, to view the wildflowers, to gain a different perspective. Forests are recreational theaters as well as gymnasiums, and this runs past "uses" to appreciating "values."

5. Esthetic values. Forests are never ugly, they are only more or less beautiful; the scale runs from zero upward with no negative domain. Even the "ruined" forest, regenerating itself, has positive esthetic properties, when trees rise to fill the space against the sky. The word "forest" invites holistic interpretation. In the forest humans experience a sense of the sublime, a benefit seldom enjoyed elsewhere in society.

6. Wildlife values. Life is Earth's great miracle. Life occurs in society, but, prior to that, life takes place in biotic communities. Wildlife is already a designated "use" but we do not always ask what use we can make of a wild animal; we value wildlife for its inherent value. We move past commodity or even amenity use to respect for life in itself, which is always life in community.

"Wild" is not always a negative term, as when we say that a field or a child has gone wild. A wild forest is a negative only from the perspective of present applied forestry; a "weed tree" is a wild element in a managed stand. Managed though forests may be, we also want the "wild" because life on Earth transcends human will, control, and use.

7. Biotic diversity values. About 500 faunal species and subspecies have become extinct in the United States, and another 500 taxa are of concern. Even where not nationally in danger, once-frequent species are locally extinct or rare. Perhaps 3,000 floral taxa are at risk out of 22,000, about one in seven, many on forested land. Hardly a forest is not impoverished of its native species. A forest ethic will optimally conserve the values in native flora and fauna.

8. Natural history values. A pristine forest is prime natural history, a relic of the way the world was for vast stretches of time. The forest as a tangible preserve in the midst of a human culture contributes to our sense of duration, antiquity, continuity, and identity. Educated forest visitors realize the centuries-long scope of

forest regeneration, the interplay of ecology and evolution, of erosional, orogenic, and geomorphic processes.

9. Spiritual values. "The groves were God's first temples" (Bryant 1883). In Latin, the consecrated groves of trees of the Romans were called *templum*. The Celts before them worshipped among the "sacred oaks." Trees pierce the sky like cathedral spires. Light filters down as through stained glass. Forests seem to be transcendent, not just symbols of transcendence invented by people. A wild forest is a sacred space, yet most foresters have been reluctant to profess this publicly or to manage for such a value.

10. Intrinsic values. Surrounded by politicians, citizens, customers, planners, economists, and surrounded by the manufactured environments of human culture, one is lured into the superficiality of anthropocentrism. Value enters, exists, and exits with the fashions of human perception and preference. Nothing counts until humans count it. Surrounded by the forest, this anthropocentric conclusion seems even more superficial. Rather, the forest itself is value-laden.

The Wider View

Biological conservation in the deepest sense is not something that originates in the human mind, is modeled by Forplan, or is written into acts of Congress. Biological conservation is innate as every organism conserves its life. Biological conservation is life; nonconservation is death. The practice of conservation by foresters emulates this because it respects the original biological conservation.

From this viewpoint, there is something naive (however sophisticated one's technology) about a reference frame where one species takes itself as absolute and values everything else in nature relative to its utility. Forestry ought to be one profession that gets daily rescue from this beguiling anthropocentrism through its contact with the original givens. Foresters ought to liberate society from a narrow humanism that puts ourselves at the center of everything. Foresters ought to help us gain fuller humanity by transcending the overly human interests and helping us to conserve a value-laden world. Scientific forestry is an empirical and theoretical study of forests; philosophical forestry goes further to reform human character in encounters with the natural, the drama of natural history. This is not a burden that forestry bears, but an opportunity it owns. This deeper

A forest ethic

will require an

unprecedented use of

science and conscience,

applied science and

applied ethics

appreciation of forests could be forestry's greatest benefit to society.

The integrity of forests and of foresters are bound together. The present SAF code speaks admirably of loyalty to other persons, to an agency, to a company. Further virtues that ought to be embraced are loyalty to a land—to the nation and its residents on their native landscapes, the human community entwined with the biotic community. Being concerned for the land does not displace concern for humanity or for a profit, although it will call for new definitions and resolution to do the right thing as opposed to simple applications of accounting principles. It is not only what a nation does to its poor, its minorities, its handicapped, that reveals the character of a people, but also what it does to its wildlife, flora, soils, rivers, landscapes, forests, its home.

A land ethic should enrich rather than impoverish the values in our social, economic, political, and biotic systems. Foresters, led by SAF, can help most in the environmental decade ahead by forging a land ethic. ■

Literature Cited

- AMERICAN INSTITUTE OF CERTIFIED PLANNERS. 1989. Code of ethics and professional conduct. Am. Inst. Certif. Plann., Washington, DC.
- BEHAN, R.W. 1990. Multiresource forest management: a paradigmatic challenge to professional forestry. *J. For.* 88(4):12-18.
- BRYANT, W.C. 1883. A forest hymn. P. 9 *in* The life and works of William Cullen Bryant, vol. III, Parke Goodwin, ed. D. Appleton & Co., New York.
- DUNCAN, D.P., R.A. SKOK, and D.P. RICHARDS. 1989. Forestry education and the profession's future. *J. For.* 87(9):31-37.
- FRANKLIN, J.F. 1989. Toward a new forestry. *Am. For.* 95(11&12):37-40.
- LEOPOLD, A. 1968. A Sand County almanac. Oxford Univ. Press, New York.
- MADDEN, R.B. 1990. The forestry challenge of the nineties. *J. For.* 88(1):36-39.
- PERLIN, J. 1989. A forest journey: the role of wood in the development of civilization. W. W. Norton, New York.
- SOCIETY OF AMERICAN FORESTERS. 1990. SAF constitution and bylaws. Soc. Am. For., Bethesda, MD.
- SHANDS, W.E. 1988. Beyond multiple use: managing national forests for distinctive values. *Am. For.* 94(3&4):14-15, 56-57.
- SHIELDS, W. 1989. Outlook: the public and natural resources. *Am. For. Counc. This Month*, October, p. 7.
- WHALEY, R.S. 1990. Securing a future resource: what is the future and how do we reach it? Unpubl. pap., presented at NY Soc. Am. For. state soc. mtg., Oriskany, NY, Jan. 17.
- WILDLIFE SOCIETY, THE. 1988. Conservation policies of The Wildlife Society. The Wildl. Soc., Bethesda, MD.
- WOOD, G.W. 1990. The art & science of wildlife (land) management. *J. For.* 88(3): 8-12.